



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8**

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July 1, 2010

Ref: EPR-SR

Ms. Lisa Farrel
City and County of Denver
Department of Environmental Health, Dept. 1009
201 W. Colfax Ave
Denver, CO 80202

Dear Ms. Farrel:

RE: EPA Comments for Vasquez Boulevard/Interstate 70 Superfund Site Operable Unit 2 Draft Feasibility Study Report

The Environmental Protection Agency (EPA) has reviewed the above referenced document. Enclosed are EPA and Colorado Department of Public Health and Environment comments. We look forward to issuance of the final Feasibility Study Report containing those changes.

If you have any questions, please contact Sam Garcia at 303-312-6247.

Sincerely,

A handwritten signature in cursive script that reads "Sam Garcia".

Sam Garcia
Remedial Project Manager

cc: Fonda Apostolopoulos, CDPHE
Richard Sisk, EPA
Claude Murray, NFI

Enclosure

EPA Comments on

Draft Feasibility Study Report, Vasquez Boulevard/Interstate 70 Superfund Site Operable Unit 2 – On-Facility Soils, Former Omaha and Grant Smelter, April 16, 2010

The above referenced document was reviewed by the USEPA for compliance with EPA guidance for conducting Remedial Investigations/Feasibility Studies (RI/FS) under CERCLA, technical evaluation and consistency, and editorial issues. The document was found to follow the EPA guidance document for preparation of the FS.

1. Soil samples were taken from the Pepsi Bottling Group on January 2010. Please clarify if the data was incorporated into this draft report?
2. Table of Contents (TOC), 3.4: page number 12 is in the wrong place.
3. TOC, 4.3 and 4.4: should be header level 3, not level 2.
4. TOC, 5.2.1.4, 5.2.2.4, 5.2.3.4, 5.2.4.4: Change “and” to “or”.
5. TOC, 6.1.1.1 and 6.1.1.2: should be header level 3, not level 4.
6. TOC, List of Figures, Figures 4C, 5A, 5B, 5C, and 9: TOC does not match figure title.
7. TOC, Appendix A, Figure A-5: (0 to 5 ft) should be (5 to 10 ft).
8. TOC, Appendix A, Figure A-6: (0 to 5 ft) should be (10 ft and greater).
9. List of Acronyms: “UOA” should be “UAO”.
10. List of Acronyms: “ug” should be “μg”.
11. Page 1, Section 1, paragraph 4, first sentence: “heath” should be “health”.
12. Page 4, Section 2.1, last paragraph: The reference “USEPA, 1998” refers to two entries in the reference section.
13. Page 4, Section 2.1, last paragraph, sent. 4: Add “a” to “...groundwater was not *a* significant...”
14. Page 4, Section 2.1, last paragraph, sent. 5: Remove from Site to the end of the sentence.
15. Page 4, Section 2.2, sent. 3: Remove “Therefore.”
16. Page 7, Section 2.4 paragraph 3 indicates that the HHRA indicates the “Ingestion of surface soil containing **arsenic**, **manganese**, and **thallium** was identified as a potential concern for future residents. Exposure to **lead** in soil was identified as a potential concern for a future child resident in residential exposure units **R1, R2, and R3.**” Later in Section 5.2.4.5 page 45 paragraph 2 it states that “Implementation of ICs to restrict residential use at the Site would limit or prevent exposure of potential future residential users to **lead** and **arsenic** in residential exposure units R1, R2, and R3 (all areas of the OU except the south half of the Denver Coliseum parking lot); and metals in residential exposure unit R2.” Explain why arsenic was included in EU R1, R2, and R3 in Section 5.2.4.5 but is not

included in EU R1, R2, and R3 in Section 2.4? If arsenic should be included in R1, R2, and R3 then clarify that in Section 2.4.

17. Page 7, Section 2.4, paragraph 4: Describe locations of residential exposure units R1 and R3, and provide a figure for units R1 through R3.
18. Page 8, Section 2.5, last paragraph: There is no "USEPA, 2002b" reference in Section 7.
19. Page 9, Section 3.2, sent. 3 and 4: Change "State" to lowercase.
20. Page 10, Section 3.3: "EPA, 2009" should be "USEPA, 2009a" or "USEPA Region 8, 2009a".
21. Page 11, Section 3.3, paragraph 3, sent. 1: Change "The" to "This."
22. Page 12, Section 3.3, last paragraph: Thiessen polygons are displayed on Figures A-7 through A-9, not A-1 through A-9 as discussed in this section.
23. Page 12, Section 3.4.1, sent. 4: Remove "the" from "...that pass *the* both the..."
24. Page 14, Section 3.4.3, first paragraph: "USEPA, 1999" should be "USEPA, 1999b".
25. Page 19, Section 4.2.2, last paragraph, first sentence: Sentence is unclear.
26. Page 19, Section 4.2.2.1: "BOU" is not defined.
27. Page 20, paragraph 1, sent. 2 and 3: Change the end of sentence 2 to "...of the Colorado Environmental Covenants law." Remove sentence 3. The environmental covenants are enforceable and an easement is not needed.
28. Page 20, Section 4.2.2.3, sent. 1: A Unilateral Administrative Order (UAO) on Consent doesn't make sense; Unilateral and Consent don't go together.
29. Page 20, Section 4.2.2.4, paragraph 2, first sentence: Add "database of the "before "Utility..."
30. Page 20, Section 4.2.2.4, paragraph 2, second sentence: Modify to read "Listing on Utility Notification Center of Colorado database will provide a mechanism to notify potential contractors of the presence of contamination, and the restrictions and requirements for excavation at the site, and also provide a mechanism ...".
31. Page 21, Section 4.2.2.6, paragraph 1, sent. 1: Change the beginning of the sentence to "EPA recommends that ICs be layered..."
32. Page 21, Section 4.2.2.6: "EPA, 2000" should be "USEPA, 2000a".
33. Page 21, Section 4.2.2.6, paragraph 2: It is unlikely that all four types of ICs will be implemented at all properties?
34. Page 21, Section 4.2.2.6, paragraph 2, bullet 2: End the sentence after "risk to humans."
35. Page 22, paragraph 1, sent. 5: Change "overly" to "overlay."

36. Page 22, paragraph 1, last sent.: Should “would also require” be change to “may also require”? The State will not approve an environmental covenant that requires future undefined remedial action.
37. Page 23, paragraph 2: Would the 8 inches of soil excavated be disposed of off site?
38. Page 23, Section 4.4, paragraph 4: the separate color on Figures A-8 and A-9 that is referred to in this paragraph could not be identified on the figures.
39. Page 28, Section 5.1.2, paragraph 1, last sent.: Change “Appendix A” to “Table 1.”
40. Page 34, Section 5.2: There are only four remedial alternatives listed, not seven.
41. Page 35, Section 5.2.1.2, last sent.: Add “...and state environmental covenants law would not be met” to the end of the sentence.
42. Page 35, last paragraph: Why is the RAO discussion needed in each discussion of short-term effectiveness?
43. Page 37, Section 5.2.2.3, next to last sentence in Magnitude of residual risk paragraph, “insure” should be “ensure” and “engineering controls” should be “institutional controls.”
44. Page 38, Section 5.2.2.6: Do we need to discuss the implementation challenges with each of the types of ICs proposed here?
45. Page 38, 5227: It would be more convenient if costs figures are placed in the narrative.
46. Page 39, Section 5.2.3.1, paragraph 1: What if the building is removed?
47. Page 39, Section 5.2.3.2: What about state environmental covenants?
48. Page 47, Section 6.1, last sent.: Replace “as each” with “...*the selected* alternative must meet these two criteria.
49. Page 47, Section 6.1.1.1, last sent.: Add “components” to sentence: “...combination of engineering *components* and ICs under Alternatives 3 and 4.”
50. Page 48, Section 6.2.1.1, sent. 1: Change as follows: “...Alternative 2; risk *of exposure* would be reduced...”
51. Page 50. First full paragraph, sent. 2: While excavation and disposal would permanently remove the contaminants of concern from the site and reduce toxicity, mobility, and volume of contaminants at the site, it does not treat the soil to reduce/remove the contaminants.
52. Page 50, Section 6.2.3, paragraph 5: Time to achieve response objectives is stated as six months which does not agree with the one year time frame stated in Section 5.2.2.5.
53. Section 7: There are two “USEPA, 1998” references that should be differentiated.
54. Table 1: The following acronyms should be added to the Acronym List: CFR, CWA, SIP, TCLP (and defined), L, m3, NESHAPs (and defined), and CCR.
55. Table 1, page 1, National Ambient Air Quality Standards: Change Potentially Relevant and Appropriate to “No.” Delete the last sentence of the Comment and add: “See Colorado Air

Pollution Prevention and Control Act concerning the applicability of requirements implemented through the SIP. NAAQS are implemented through the SIP.

56. Table 1, page 1, Colorado Soil Evaluation Values: Remove from ARARs.
57. Table 1, page 2, Endangered Species Act: Will the potential presence of endangered species be analyzed?
58. Table 1, page 3, Hazardous Materials Transportation Regulations: This would only be applicable in there is *on-site* transportation of contaminated materials on public streets. If this is only off-site transportation, it is not an ARAR.
59. Table 1, page 3, State of Colorado Hazardous and Solid Waste: In the Comment section, each of these should have "on site" added as the last word in the sentence.
60. Table 1, page 4, Item 6: In the Comment section, this would not be an ARAR if the transportation is mainly off site.
61. Table 1, page 5, Item 10: Since Regulation only deals with stationary sources, this standard is potentially relevant and appropriate.
62. Table 1, page 6, Item 12: Is this item referring to hazardous waste as in the first column or hazardous substances as shown in the Description column? Is this primarily an off-site issue?
63. Table 2, Item 2-Institutional Controls: In the 30-year Present Worth Costs (\$), how did you come up with the costs and did you do any breakdown of costs for the 4 different types of ICs?
64. Table 3: The following acronym should be added to the Acronym List: CAPPKA (and defined).
65. Figures 1 and 2: Label I-70 and I-25 if the site location is going to describe with these features.
66. Figure 7: "XXX" in screening comments is unclear.
67. Figure 8: Should the left column heading be Soil instead of Groundwater?
68. Figure 10: Add "sqft" to acronym list or define on figure.
69. Figures 4A-C and 5A-C: Remove sample location symbols and concentrations from each figure that are not greater than the limit stated on the figure. This should reduce confusion and promote ease of locating areas of contamination that are being described. See Figure A-7 for example.
70. Figures A-1 through A-9: Analytical results are not supported by RI Appendix A data table (e.g., the "U" qualifier on the 4 ft arsenic sample from BB-BB-33 is not listed on the data table for that sample).
71. Figure A-1 through A-6: The 800 mg/kg limit for lead and the 70 mg/kg limit for arsenic should be "Action Level" not "background limit".
72. Figure A-3: Each sample location has multiple overlaying labels.

73. Figure A-4: Sample location labels are too close together which makes it difficult to associate a label to the correct location. There are numbers with the same label style as the point locations that could be area concentrations, but their format is not defined in the legend. So, it is unclear as to what those numbers represent.
74. Figure A-5: There are areas on the map with hatch patterns that are not defined in the legend.
75. Figure A-9: The "Yes" and "No" in the legend is unclear as to the meaning.
76. Appendix B: The following acronyms should be added to the Acronym List: RD/RA, cy, Lcy, MSF, lf, lin, sq ft, cu yds, max.
77. General Comment: It is suggested that either mg/kg or ppm is used throughout the document, not both.





Fw: Additional Comment Regarding Draft FS
Sam Garcia to: cmurray, fonda.apostolopoulos

07/12/2010 10:58 AM

FYI, I sent one additional comment to Lisa. See my message below and the attached table.

Sam Garcia
EPA Remedial Project Manager
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----- Forwarded by Sam Garcia/R8/USEPA/US on 07/12/2010 10:56 AM -----

From: Sam Garcia/R8/USEPA/US
To: Lisa.Farrell@ci.denver.co.us
Cc: Christopher Wardell/R8/USEPA/US@EPA
Date: 07/08/2010 03:00 PM
Subject: Additional Comment Regarding Draft FS

Hi Lisa,

I have one additional suggestion regarding the subject document. Attached is a table we used on OU 3 FS and Proposed Plan. I suggest we use this same type of table on OU 2.

Thanks,

Sam Garcia
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Comparison of Alternatives by Evaluation Criteria
Vasquez Boulevard/I-70 Superfund Site Operable Unit 3

EVALUATION CRITERIA		SOIL ALTERNATIVES				GROUNDWATER ALTERNATIVES				NOTES
		1 No Action	2 Institutional Controls	3 Excavation and Disposal	4 Containment and Institutional Controls	1 No Action	2 Public Education and Institutional Controls	3 Abandonment of Wells and Institutional Controls	4 Permeable Barrier Wall and Institutional Controls	
Threshold	1	○	●	●	●	○	●	●	●	Currently there is no exposure pathway to contaminated soil at the site.
	2	○	●	●	●	○	●	●	●	The no action alternatives would not meet ARARs for the site.
Primary Balancing	3	○	●	●	●	○	●	●	●	Institutional controls will need to be enforced long-term for the alternatives which include institutional controls to continue to be effective.
	4	○	●	●	●	○	○	○	●	Institutional controls that prevent disturbance of contaminated soil do not provide treatment but will eliminate potential exposure. Likewise, abandonment of wells does not provide treatment but does eliminate exposure to contaminated groundwater.
	5	○	●	●	●	○	●	●	●	Currently there is no exposure pathway to contaminated soil at the site. Alternatives that involve excavation and construction will take longer to implement and have higher short term risks due to disturbance of potentially contaminated soil and risks associated with construction.
	6	●	●	○	○	●	●	●	○	Alternatives that involve excavation and construction are more difficult to implement.
	7	●	●	○	○	●	●	●	○	The options that include excavation and construction (soil alternatives 3 and 4, groundwater alternative 4) do not provide a substantial increase in overall protection for the increased cost.
Modifying	8									CDPHE acceptance will be evaluated at the close of the Public Comment Period.
	9									Community acceptance will be evaluated at the close of the Public Comment Period.

High→Moderate→Low

